

Claims

1. A method for downloading audio characteristics to terminal equipment, **characterized** in that it comprises the steps of
- providing a score information part (101, 302, 303) describing the presentation instructions of an audible signal,
 - providing an instrument information part (104, 305, 306) describing the parameters for synthesizing an audible signal the presentation instructions of which is described by said score information part,
 - providing compatibility information (123, 210, 211, 212, 220, 315) describing the compatibility of said score information part and said instrument information part with certain processing and storing capacity and
 - as a response to a selection command (411, 418), downloading (412, 419) said score information part and said instrument information part to terminal equipment through a communication network.
2. A method according to claim 1, **characterized** in that it comprises additionally the step of combining said score information part (101), said instrument information part (104) and said compatibility information (123) into a common sound packet structure (100), so that said step of downloading (412) said score information part and said instrument information part to terminal equipment corresponds to downloading said sound packet structure to terminal equipment.
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3. A method according to claim 2, **characterized** in that it further comprises the steps of
- providing a user interface sounds information part (107) describing a plurality of user interface sounds and
 - combining said user interface sounds information part (107) to said sound packet structure (100) prior to downloading said sound packet structure to terminal equipment.
4. A method according to claim 2, **characterized** in that it further comprises the steps of
- providing a generic audio part (110) describing at least one arbitrary sound sequence and
 - combining said generic audio part (110) to said sound packet structure (100) prior to downloading said sound packet structure to terminal equipment.

5. A method according to claim 2, characterized in that it comprises the steps of

- providing a database (200, 200') of a plurality of sound packets,
- as a response to a message (406) from terminal equipment identifying the terminal equipment as being of a certain type, selecting (407) from said database a number of

5 sound packets the compatibility information of which shows them to be compatible with the known processing and storing capacity of terminal equipment of said certain type,

- offering (408) said selected number of sound packets to the terminal equipment as alternatives for selection, and

10 - as a response to said selection command (411, 418), downloading (412, 419) a selected one of said selected number of sound packets to terminal equipment through a communication network.

6. A method according to claim 5, characterized in that prior to the step of identifying the terminal equipment as being of a certain type it additionally

15 comprises the step of

- as a response to an initiation (402) from said terminal equipment, requesting (403) the terminal equipment to indicate its type.

7. A method according to claim 2, characterized in that prior to the step of combining said score information part, said instrument information part and said

20 compatibility information into a common sound packet structure it comprises the step of

- providing a database (300) comprising a number of score information parts (302, 303) in a score information library (301) and a number of instrument information parts (305, 306) in an instrument information library (304).

8. A method according to claim 1, characterized in that the step of providing a score information part (101) comprises the substep of providing a plurality of score data subparts (102, 103) each of which describes the presentation instructions of a single piece of music.

9. A method according to claim 8, characterized in that the step of providing a score information part (101) comprises the substep of providing a score information part in a MIDI form.

10. A method according to claim 1, characterized in that the step of providing an instrument information part (104) comprises the substep of providing a plurality of instrument data subparts (105, 106) each of which describes one instrument for

synthesizing an audible signal the presentation instructions of which is described by said score information part.

11. A method according to claim 1, **characterized** in that the steps of providing a score information part (101) and providing an instrument information part (104) together constitute a superstep of generating a file in a Rich Music Format form.

12. A method according to claim 1, **characterized** in that the steps of providing a score information part (101) and providing an instrument information part (104) together constitute a superstep of generating a file in a MPEG-4 form.

13. A method according to claim 1, **characterized** in that it comprises the step of providing at least one of said score information part (101, 302, 303), instrument information part (104, 305, 306) and compatibility information (123, 210, 211, 212, 220, 315) in encrypted form.

14. A method according to claim 1, **characterized** in that the step of downloading (412, 419) said score information part and said instrument information part to terminal equipment comprises the substep of encrypting at least one of said score information part and instrument information part.

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15. A method for downloading audio characteristics from a network to terminal equipment, **characterized** in that it comprises the steps of

- indicating (406) the type of the terminal equipment to the network,
- receiving (408) from the network information concerning available score information parts (101, 302, 303), each of them describing the presentation instructions of an audible signal, and instrument information parts (104, 305, 306), each of them describing the parameters for synthesizing an audible signal the presentation instructions of which is described by a score information part,
- indicating (411, 418) at least one score information part and at least one instrument information part from said available score information parts and instrument information parts as selected, and
- receiving (412, 419) the score information part and the instrument information part indicated as selected from the network.

16. A method according to claim 15, **characterized** in that it comprises, prior to the step of indicating (406) the type of the terminal equipment to the network, the steps of

- initiating (402) the downloading of audio characteristics by establishing a connection to a network device and

- receiving (403) from said network device a request to indicate the type of the terminal equipment.

17. A method according to claim 15, characterized in that comprises additionally the step of decrypting at least one of the received score information part and instrument information part.

18. A method for downloading audio characteristics to terminal equipment, characterized in that it comprises the steps of

- providing a score information part (101, 302, 303) describing the presentation instructions of an audible signal,

- providing an instrument information part (104, 305, 306) describing the parameters for synthesizing an audible signal the presentation instructions of which is described by said score information part,

- providing compatibility information (123, 210, 211, 212, 220, 315) describing the compatibility of said score information part and said instrument information part with certain processing and storing capacity and

- transmitting (412, 419) said score information part and said instrument information part towards terminal equipment; A

wherein the step of transmitting (412, 419) said score information part and said instrument information part towards terminal equipment comprises the substeps of multiplexing (803) said instrument information part into a digital information stream and broadcasting the resulting multiplexed digital information stream through a digital broadcasting network (804, 806).

19. A method according to claim 18, characterized in that the step of transmitting (412, 419) said score information part and said instrument information part towards terminal equipment additionally comprises the substep of multiplexing (803) said score information part into said digital information stream together with said instrument information part before broadcasting the resulting multiplexed digital information stream through said digital broadcasting network (804, 806).

20. A method according to claim 19, characterized in that it comprises the steps of

- producing a plurality of mutually different sound packets by selecting a certain score information part and a certain instrument information part into each sound packet,

- multiplexing (803) said plurality of sound packets into a digital information stream and broadcasting the resulting multiplexed digital information stream through a digital broadcasting network (804, 806), and
- repeating said step of multiplexing and broadcasting for a number of times.

5 21. A method according to claim 19, characterized in that it additionally comprises the steps of

- identifying a piece of information related to said score information part and said instrument information part but coming from a different content source and
- synchronizing the multiplexing of a score information part and an instrument

10 information part into said digital information stream with the multiplexing of said related piece of information into said digital information stream.

22. A method according to claim 19, characterized in that the step of transmitting (412, 419) said score information part and said instrument information part towards terminal equipment additionally comprises the substep of multiplexing (803) said

15 compatibility information into said digital information stream together with said instrument information part and score information part before broadcasting the resulting multiplexed digital information stream through said digital broadcasting network (804, 806).

23. A method according to claim 18, characterized in that it additionally

20 comprises a step of receiving a piece of selection information from said terminal equipment, said selection information indicating said score information part and said instrument information part as being selected by said terminal equipment for downloading.

24. A method according to claim 18, characterized in that the substep of

25 broadcasting the resulting multiplexed digital information stream through a digital broadcasting network comprises the step of broadcasting the resulting multiplexed digital information stream through a digital broadcasting network in a Digital Video Broadcasting form.

25. A method according to claim 18, characterized in that the step of

30 downloading (412, 419) said score information part and said instrument information part to terminal equipment additionally comprises the substep of downloading (412, 419) said score information part to said terminal equipment through a point-to-point connection in a communication network.

26. A method according to claim 18, **characterized** in that it comprises the step of providing at least one of said score information part (101, 302, 303), instrument information part (104, 305, 306) and compatibility information (123, 210, 211, 212, 220, 315) in encrypted form.

5 27. A method according to claim 18, **characterized** in that the step of downloading (412, 419) said score information part and said instrument information part to terminal equipment additionally comprises the substep of encrypting at least one of said score information part and instrument information part.

10 28. An arrangement for downloading audio characteristics from a network to terminal equipment, said arrangement comprising a network device (200, 200', 300, 801), **characterized** in that the network device comprises

- a database of score information parts (101, 302, 303), each score information part describing the presentation instructions of an audible signal,
- a database of instrument information parts (104, 305, 306), each instrument information part describing the parameters for synthesizing an audible signal the presentation instructions of which is described by a score information part,
- compatibility information (123, 210, 211, 212, 220, 315) associated with said score information parts and instrument information parts, describing the compatibility of said score information parts and said instrument information parts with certain processing and storing capacity and
- means for responding to a selection command by downloading a score information part and a instrument information part to terminal equipment through a communication network.

25 29. An arrangement according to claim 28, **characterized** in that said database of score information parts and said database of instrument information parts form a common database structure (200, 200') where each score information part is associated with at least one instrument information part to provide a sound packet structure (100), and said compatibility information (123) is arranged to describe the compatibility of each sound packet with certain processing and storing capacity.

30 30. An arrangement according to claim 29, **characterized** in that said compatibility information (123) is arranged to describe the compatibility of each sound packet with the processing and storing capacity of certain terminal types.

31. An arrangement according to claim 29, **characterized** in that it further comprises means (313) for coupling selected score information parts (302, 303) and

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selected instrument information parts (305, 306) into a common sound packet structure for downloading.

32. An arrangement according to claim 29, characterized in that it further comprises means for encrypting selected score information parts (302, 303) and
- 5 selected instrument information parts (305, 306).